



12627 San Jose Boulevard, Suite 603 • Jacksonville, Florida 32223

Douglas V. Lucas, P.E.  
Licensed in Florida

Office (904) 260-2690  
Fax (904) 260-2671  
doug@Lucas-Scott.com

December 21, 2007

Mr. Steve Durham  
Ponte Vedra, Florida

**Re: Supplemental 37 CFR 1.132 Declaration for Durham Patent for Energy  
Generating Shelter System and Method (Patent # 11,438,195)**

Dear Mr.:

I am a licensed Structural Engineer with experience in commercial and residential structural projects. My educational background consists of a Bachelor's Degree in Civil Engineering and a Master's Degree in Civil Engineering from Cornell University. I have reviewed Mr. Durham's patent applications and compared them to the previous art/patents for Dinwoodie, Lane, Saunders, and Kowalski.

In addition to above patents, I have also reviewed Mr. Durham's scale model examples and respectfully am making the examiner aware that Mr. Durham's invention is not a combination of prior art or obvious in comparison to the cited prior art.

Listed below are the reasons, I believe Mr. Durham's patent is not obvious or combinations of prior art and believe that Mr. Durham's patent (#11,438,195) is clearly distinguishable and unique from any of the prior art by the unique structural placement and configuration of the vertical lateral support column shown in patent Figure 10 which shows his vertical column support laterally positioned and in a longitudinal plane of the parking space and unobstructive in this respect.

On the other hand, the same vertical support column is horizontally positioned, yet still laterally facing the longitudinal plane of the parking space and is still quite uniquely positioned in this respect. The Horizontal placement and positioning of the structural support at the front of the parking space in Figure 10, makes Mr. Durham's carport even less obstructive because the positioning of the vertical column support is further away from the car side door panel and has less of a chance of obstructing the coming and going of parking vehicles.

My opinion as a Structural Engineer should help to resolve any previous misunderstandings, or misinterpretations the patent examiner may have had when he reviewed all the prior art and I also have reviewed previous patent claims submitted by Mr. Durham's previous attorney James Ryndak, whereby the examiner had overlooked the unobstructive element of Mr. Durham's unique patent claim as well as the unique placement, structural configuration and arrangement of the lateral vertical column support column being "Laterally spaced past the edge of the canopy, so as to permit substantially unobstructive access to the sheltered area."

D

This aspect clearly distinguishes Mr. Durham's invention structurally and placement-wise of the vertical lateral support column from any of the cited prior art patent descriptions/disclosures, ornamental features or any carport placements of the previously cited patent shelters, carports canopy or shading devices. I also note that Mr. Durham's invention is not an obvious combination of solar panels and carports and is not inherently obvious.

By clearly pointing out to the examiner the (Currently Amended) embodiment of newly submitted claims 1 and 2, (system and method claims) the patent examiner should not overlook the fact that placement of the lateral vertical support column being laterally spaced safely "away" from the parking space is unique compared to the prior art and that the distance of lateral column support from a motor vehicle is separated by a unique parking stripe creating a borderline showing a definite distance and separation away from the vehicle's body panels and front bumper by using this laterally placed vertical support no matter which direction the vertical lateral support is placed or set in a parking lot. The parking stripe in patent drawing Figure 1 and 10 show's Mr. Durham's clear boundary away from a vehicle by using this lateral vertical support and distinguishes it from the prior art ornamental design's or utilitarian functions or features.

Mr. Durham's lateral-vertical support column mounted indirectly to a foundation "away" from a parking space and laterally positioned and away from a parked vehicle capture's this inventions true unique unobstructive design feature and placement of the vertical column. Whereas the lateral support is uniquely configured, one should also consider the "placement" of the vertical support column away from a parked vehicle outside of a parking space to really capture the true nature of this invention over the prior art.

Mr. Durham's invention indirectly mounts the vertical column to a foundation as seen in Figure 10 and the column support is clearly away from the parking space as shown in patent drawing Figure 10 does not rely on the exactness of the lateral placement of the vertical support to only on the side of the parking space. The lateral placement of vertical column support can readily be placed in front of a vehicle and still retain the unique placement of this invention as unobstructively placed in a parking lot.

Also, Mr. Durham's patent Figure's 1 and 10 application (11,438,195) shows a borderline of safety by showing a Demarcation line (parking stripe) separating the parked vehicle from the lateral-vertical structural support just to emphasize the region or distance between the vertical support and the motorcars side door panel for safety borderline reasons. Clearly, Dinwiddie's patent shows a vertical support in the center of his ornamental shade design which is evidently "obstructive" in comparison to Mr. Durham's lateral-vertically claimed support column placed away from the center of the roof and laterally placed upfront and laterally centered away from a vehicle's side door or front bumper as shown and compared to Dinwoodie's design patent which is not laterally placed and/or upfront away from a vehicle's side door or front bumper and is obstructive.

In patent Figure 10 application (11,438,195) Mr. Durham's invention is evidently distinguishable and "unobstructive" compared to the prior art alone and in combination from my professional opinion, as one skilled in the art. I believe that this lateral-vertical column supports placement and configuration is a unique utilitarian feature and separate's Mr. Durham's system

and method patent claims 1 and 2 from the prior art and is not at all inherently obvious or combinations or prior art, as stated by the patent examiner respectfully in his prior art.

Furthermore, after reviewing Dinwoodie's which is obstructive or would be obstructive (if cited correctly) and cannot be relied upon as prior art because they essentially do not teach an "unobstructive" Energy Generating Shelter System and Method that allows and automobile "unobstructive" ingress or egress from a parking space as outlined and uniquely claimed by Mr. Durham's invention and disclosure.

Lane's design patent does not show or teach an "unobstructive" carport with a vertical-lateral column support because in the middle of Lanes' canopy there is a structural support that makes this design obstructive when placed in the middle of the carport making that canopy very obstructive in comparison to Mr. Durham unobstructive carport which is laterally placed away from the vehicle underneath the carport and the parking space.

I would like to make clear to the patent examiner that any previously cited patents by the patent examiner regarding solar panels alone and in combination, with cited prior art carports, shade devices or shelters in relation to application (11,438,195) is not inherently obvious to combine art and then come to the conclusion that anyone skilled in the art can accomplish what Mr. Durham's unique invention accomplishes when laterally placing and configuring his uniquely positioned vertical column support away from the parking space.

I also have reviewed Mr. Durham's scale model pictures dated 1997-2000, showing his Energy Generating Shelter System and Method scale model. Mr. Durham's scale model clearly shows a photovoltaic canopy and supporting structure laterally placed away from a parked vehicle unobstructively. Mr. Durham's scale model clearly shows how his photovoltaic canopy and lateral-vertical support column can be placed in relation to a parked vehicle underneath the canopy, unobstructively and/or located in front of a vehicle bumper area or on the side of a vehicle door area and still be laterally placed and unobstructive as seen in patent Figures 1 and 10.

Additionally, as one skilled in the art, I do not find that Mr. Durham's invention is obvious, regardless of the laterally placed vertical support column's configuration or placement, in that this invention (11,438,195) is not a combination of any of cited the prior art or combinations of obvious conclusions, in order to create and define Mr. Durham's unobstructive use of his carport in a parking lot used as a canopied, photovoltaic shelter and connected to the electrical grid.

Accordingly, photovoltaic canopied carports are not inherently commonly known in the arts especially, when this application was filed. As a Structural Engineer, I am very familiar with commercial carport structures and do not anticipate that solar panels and carport combinations and connecting to the electrical grid is a commonly known practice from one skilled arts. I also do not believe that by considering solar panels mounted to a house and then connected to the electrical grid (as cited by the examiner in his example) qualifies as prior art and then associating Mr. Durham's carport does the same unobstructively.

Likewise, Dinwoodie's invention is not unobstructive and does not teach this aspect as an unobstructive structural configuration and placement element in his design patent and does not teach unobstructive access or egress of a vehicle under it's "obstructively" placed

3)

vertical structural support and canopy and is not obvious in comparison to Mr. Durham's unobstructive teaching and use of a photovoltaic carport in a parking lot, as shown in Figure's 10 respectively.

The reasoning or association of an unobstructively mounted (Energy Generating Shelter System and Method) as disclosed by Mr. Durham's invention teaches an unobstructive layout which the other patent's cited do not teach unobstructively used as a carport for the ingress and egress of a vehicle over a sheltered area or parking space with a photovoltaic roof; and none of the prior art in this light teaches or suggests this in the examiner's cited art or original argument's and that none of the other carport's cited by the examiner teaches an "unobstructive" element, in view of Mr. Durham's invention and carport layout when used commercially.

The combination of the unobstructive carport structure in (11,438,195) and the roof mounted solar panels connected to the electrical grid in "not" inherently obvious or commonly known in the arts (for unobstructive carports), as I can attest to. This assumption would be incorrect on the examiner's part to come to this conclusion (as I myself am one skilled in the art) to combine other carport's that are obstructive or clearly not "defined" as unobstructive and come to his conclusion and would be an incorrect assumption on the examiner's part, from my professional opinion.

I have also reviewed the Saunders patent, and see that there is no mention of a laterally placed vertical-lateral upright structural support that's unobstructive and laterally placed "away" from the parking space so as to protect an automobile from safe ingress or egress in a parking lot. Saunder's patent does teach or accomplish what Mr. Durham's patent (11,438,195) does, when laterally placed as a permanent structure with demarcation lines as shown in Figure 10.

Mr. Durham's disclosure and patent Figures (10 and 1) clearly indicate and show demarcation borders (parking stripes), clearly differentiating and teaching a laterally placed column safely placed away from a vehicle on the side and upfront of the parking space covering and protecting more than one vehicle as shown in Figure 10, used in a parking lot.

I have also reviewed the Kowalski patent and noticed that this design is connected to a wall. Mr. Durham's patent clearly is not connected to a wall and any combination of this device with Mr. Durham's would not be an indicator of combinatorial prior art. As disclosed, I find that Mr. Durham's invention is quite unique and is not obvious or any combination's of any of the prior art, as I can attest to this fact, as one skilled in the art.

I find none of the prior art alone or in combination is obvious over Mr. Durham's Patent Pending Energy Generating Shelter System and Method (11,438,195).


4)

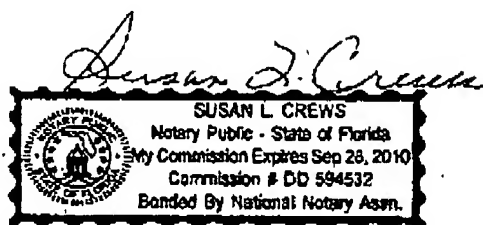
*Patents considered in this professional opinion:*

1. *Dinwoodie*
2. *Lane*
3. *Kowalski*
4. *Scale Models*
5. *Saunders*

If you have any questions concerning this determination, please do not hesitate to contact me.

Sincerely,

  
Douglas V. Lucas, P.E.  
Structural Engineer



5)

Application 10,679,075

Admitted: Dec. 28, 2007

Reply to Office Action due by 1-8-2007

App - 1-13

Amendments to the Claims

The listing of claims will amend and withdraw certain prior claim versions, and listings, of claims in this application as discussed with patent examiner in informal phone interview:

Listing of Claims:

Independent Claims: 3

Dependent Claims: 12

Claims 22, 23, 24, 30, 34, and 35 are withdrawn

21. (Currently Amended) ~~A shelter~~ photovoltaic canopy capable of producing electrical energy comprising:

a photovoltaic canopy defining a sheltered area thereunder, the sheltered area including at least one vehicle parking space, the photovoltaic canopy including an upper surface having a first photovoltaic device, and a lower surface having a second ~~photovoltaic device, and~~ a light emitting diode device, wherein the ~~first and second~~ photovoltaic device ~~are~~ is capable of producing an electrical current when exposed to light;

a supporting structure connected to and supporting the canopy and permitting substantially unobstructed access by a vehicle to the sheltered area; and

an electrical light emitting diode load operatively connected to the ~~first and second~~ photovoltaic devices for utilizing the electricity generated by the photovoltaic device when the photovoltaic ~~device~~ canopy is exposed to light;

wherein the shelter has no walls

)

22. (Withdrawn)

23. (Withdrawn)

24. (Withdrawn)

2)

25. (Currently Amended) The shelter photovoltaic canopy of claim 21 wherein the first ~~and second~~ photovoltaic devices ~~are~~ is selected from the group consisting of ~~crystalline photovoltaic systems~~, flexible thin film photovoltaic systems, and the second device consists of stacked photovoltaic layers and photovoltaic and light emissive layers.



26. (Currently Amended) The ~~shelter~~ photovoltaic canopy of claim 25 wherein the ~~first and second photovoltaic canopy devices are~~ is transparent.

27. (Currently Amended) The shelter photovoltaic canopy of claim ~~26~~ 25 wherein the transparent ~~first and second photovoltaic devices~~ canopy are is composed of multiple layers of flexible thin transparent photovoltaic material.

4)

28. (Currently Amended) The ~~Shelter~~ photovoltaic canopy of claim ~~24~~ 25, further comprising:

an organic artificial light source layer ~~associated~~ attached with to the underside of the canopy;

wherein the second ~~photovoltaic~~ artificial light source information display device layer is directed toward the ground to receive light from the artificial light source and;

wherein the upper surface of the photovoltaic canopy is oriented to receive sunlight directly.

5)

29: (Currently Amended) The ~~shelter~~ photovoltaic canopy of claim ~~28~~ 25 wherein the artificial emissive light source layer is dispersed within the ~~second~~ photovoltaic ~~device~~ canopy.

6)

30. (Withdrawn)

7

31. (Currently Amended) The light emitting diode device of claim 21 ~~wherein the light emitting diode~~ is capable of displaying human readable information; and

act as an information display.

32. (Currently Amended) The device claim 21 wherein the light emitting diode is a ~~flexible~~ thin film organic light emitting diode layer capable of acting as an information display.

9)

33. (Currently Amended) A ~~shelter~~ photovoltaic canopy capable of producing electrical energy comprising:

a canopy defining a sheltered area thereunder, the sheltered area including at least one vehicle parking space;

a supporting structure connected to and supporting the canopy and permitting substantially unobstructed access by a vehicle to the sheltered area;

~~a photovoltaic canopy device associated with the canopy, the photovoltaic device being~~ is capable of producing an electrical current when exposed to sunlight, the photovoltaic ~~canopy device including~~ includes a light emitting coating layer attached to the underside and the photovoltaic ~~canopy device and~~ is capable of generating electricity from the light emitted by the light emitting coating layer; and

an electrical light emitting layer load is operatively connected to the photovoltaic ~~canopy device~~ canopy for utilizing the electricity generated by the photovoltaic ~~canopy device~~ canopy when the photovoltaic ~~canopy device~~ canopy is exposed light to sunlight and artificial light emitting light layer;

wherein the shelter has no walls.

9)

34. (Withdrawn)

35. (Withdrawn)

10)

36. (Currently Amended) A ~~carport~~ photovoltaic canopy comprising:

at least one canopy, the photovoltaic canopy sheltering a parking area for at least one vehicle;

an indirectly mounted foundation, laterally placed supporting structure connected to and supporting the photovoltaic canopy and permitting substantially unobstructed access by a vehicle to the parking ~~area~~ space;

~~a photovoltaic device associated with the canopy, the photovoltaic device canopy being capable of producing a DC electrical current when exposed to sunlight, the photovoltaic canopy device including having an upper surface area panel; and~~

a lower surface area, including a light emitting diode coating panel attached thereunder and the photovoltaic canopy device is capable of generating electricity from the light emitted by the light emitted diode coating panel; and

~~an electrical load operatively connected to the photovoltaic device canopy for utilizing the electricity generated by the photovoltaic canopy device when the photovoltaic canopy device is exposed to light sunlight and artificial light panel, wherein the electrical load is selected from the group consisting of the power distribution grid of a utility company and a battery.~~

"))



37. (Currently Amended) The ~~carport~~ photovoltaic canopy of claim 36 wherein the load comprises a battery which is charged by the DC current produced by the photovoltaic ~~device~~ canopy.

38. (Currently Amended) The carport of claim 36 further comprising:  
an inverter for converting the DC electrical current produced by the photovoltaic ~~device~~ canopy to an AC current; and

~~a connection for~~ transmitting the AC electrical current to a power distribution grid of the utility company

39. (Currently amended) The ~~canopy~~ photovoltaic canopy of claim 36 further comprising a reverse meter for measuring AC current produced by the inverter.

40. (Currently Amended) The ~~shelter~~ photovoltaic canopy of claim 36 wherein the ~~canopy photovoltaic canopy~~ each includes a plurality of at least two of panels, each including the upper surface panel ~~being having~~ a first photovoltaic device, the lower surface having a second ~~photoelectric device, and the light emitting diode device~~ panel attached thereunder, wherein the light emitting diode is an information display.

41. (Currently Amended) The ~~shelter~~ photovoltaic canopy of claim 36 ~~wherein,~~ wherein the position of the canopy panels ~~is~~ are tiltable and adjustable.

Admitted Dec 28, 2007  
 Reply to Office Action

Title: Energy Generating Shelter System  
 and Method  
 Inventor: Steven Durham  
 Attorney Docket No.:

(Application) 10, 679, 075

Replacement Sheet

